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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,825	05/29/2001	Thomas I. Insley	54605USA6B.007	6171

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07/17/2002

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EXAMINER

CHAN, SING P

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 07/17/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/866,825

Applicant(s)

INSLEY ET AL.

Examiner

Sing P Chan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 32-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. In the original application, the applicant submitted claims 2-37; claims should be numbered starting with claim 1. It appears claim 1 was inadvertently omitted. Noting the preliminary amendment canceling claims 1-32, the examiner has renumbered the originally filed claims as 1-31 respectively. Renumbered claims 1-31 have been cancelled leaving renumbered claims 31-36. (originally filed as claims 33-37) Claim dependencies have also been changed to correspond to the renumbering.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 32-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 32, the preamble states a method of forming a filtration media array. However, the body of the claim does not indicate when the media array is formed. For the purpose of examination "to form a charged media array, after "the second layer" in step c is assumed.

Claim 32 recite the limitation "flow channel layer assembly" in line 6. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination, the examiner will assume "(b) joining the contoured film layer to a second layer at at least one face of the contoured film layer so as to stabilize the contoured film layer and form flow channels and thereby form the flow channel layer assembly."

Regarding claim 33, it is unclear what is intended by "layering the flow channel assembly." For the purpose of examinations steps a and b in claim 32 are considered to be repeated to form a plurality of flow channel assemblies and layering the flow channel assemblies so as to form the filtration media array."

Claim 34 recites the limitation "the adjacent flow channel layers" in line 1. There is insufficient antecedent basis for this limitation in the claim. It is suggested "the" be deleted.

Claim 34 recites the limitation " multiplayer flow channel assembly" in line 3. There is insufficient antecedent basis for this limitation in the claim. It is suggested the "multiplayer flow channel assembly" be deleted and "adjacent flow channel assemblies" be substituted therefore.

Claim 35 recite the limitation "flow channel layer assembly" in line 6. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination, the examiner will assume "(b) joining the contoured film layer to a second polymeric film layer at at least one face of the contoured film layer so as to stabilize the contoured film layer and form a series of adjacent flow channels and thereby form the flow channel layer assembly."

Claim 36 recite the limitation "flow channel layer assembly" in line 6. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination, the examiner will assume "(b) joining the contoured film layer to a second layer at at least one face of the contoured film layer so as to stabilize the contoured film

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layer and form a series of adjacent flow channels and thereby form the flow channel layer assembly."

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 32 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Kalt (U.S. 4,249,919).

Regarding claim 33, Kalt discloses a method of forming an electrostatic filter. The method includes the steps of forming the first polymeric film into the desired shape using heat and pressure, bonding the first polymeric film to the second polymeric film to form the flow channel layer assembly, and charging the filter with an electrical circuit to filter the particle. (Col 3, line 30 to Col 4, line 50, Col 5, lines 8-15, and figures 1-5)

Regarding claim 34, Kalt discloses the films are bonded together using heat lamination, which partially melt one face of the multiplayer flow channel assembly. (Col 5, lines 21-22)

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalt (U.S. 4,249,919) in view of Landi et al (U. S. 5,039,567) and Schjeldahl (U.S. 4,319,952).

Kalt as applied in the above 102(b) rejection, also teaches layering the channel layer assembly to create the filtration media array with multiple flow channel layers. (Col 3, lines 30-51 and Col 3, line 60-66) Kalt does not disclose slicing filtration media array with a hot wire to fuse the adjacent layers together. However, it is well known and conventional to use a cutting means to easily form core strips such as used in Kalt from laminated blocks as shown for example by Landi et al (Col 4, lines 40-51) Landi et al indicates any means to cut are usable but does not specifically disclose the use of a hot wire. (Col 4, lines 49-51) Schjeldahl teaches using a hot wire provides a simultaneous formation of a fused weld when cutting a thermoplastic material such as the Mylar in Kalt. (Col 4, line 43 to Col 5, line 4)

It would have been obvious to one skilled in the art at the time the invention was made to easily form the cores in Kalt's from a laminated block as suggested by Landi et al using a hot wire to fuse the Mylar during cutting as suggested by Schjeldahl.

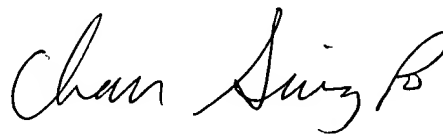
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sing P Chan whose telephone number is 703-305-3175. The examiner can normally be reached on Monday-Friday 7:30AM-12:00PM and 1:00PM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone

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numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Sing P Chan  
Examiner  
Art Unit 1734

spc  
July 15, 2002



RICHARD CRISPINO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700